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L Number	Hits	Search Text	DB	Time stamp
1	3330	(435/5).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/10/01 09:10
2	834	(435/7.24).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/10/01 09:10
3	784	(435/7.4).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/10/01 09:10
4	246	(435/377).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/10/01 09:11
5	523	(435/962).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/10/01 09:11
6	269	(435/974).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/10/01 09:11
7	5462	((435/5).CCLS.) or ((435/7.24).CCLS.) or ((435/7.4).CCLS.) or ((435/377).CCLS.) or ((435/962).CCLS.) or ((435/974).CCLS.)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/10/01 09:12
8	710	human adj leu?ocyte adj elastase	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/10/01 09:13
9	7	(((435/5).CCLS.) or ((435/7.24).CCLS.) or ((435/7.4).CCLS.) or ((435/377).CCLS.) or ((435/962).CCLS.) or ((435/974).CCLS.)) and (human adj leu?ocyte adj elastase)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/10/01 09:13

899,488
BIOSIS
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NEWS 25	Sep 16	Indexing added to some pre-1967 records in CA/CAPLUS
NEWS 26	Sep 16	CA Section Thesaurus available in CAPLUS and CA

NEWS EXPRESS	February 1 CURRENT WINDOWS VERSION IS V6.0d, CURRENT MACINTOSH VERSION IS V6.0a(ENG) AND V6.0Ja(JP), AND CURRENT DISCOVER FILE IS DATED 05 FEBRUARY 2002
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FILE 'HOME' ENTERED AT 08:29:40 ON 01 OCT 2002

=> file biosis
COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                           ENTRY    SESSION
FULL ESTIMATED COST                                         0.21       0.21

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CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 25 September 2002 (20020925/ED)


=> s hle
           487 HLE
             5 HLES
L1         492 HLE
               (HLE OR HLES)

=> s human(W)leu!ocyte(W)elastase
       5264912 HUMAN
       2489323 HUMANS
       5340260 HUMAN
               (HUMAN OR HUMANS)
         67908 LEU!OCYTE
         11592 ELASTASE
           307 ELASTASES
         11672 ELASTASE
               (ELASTASE OR ELASTASES)
L2         688 HUMAN(W)LEU!OCYTE(W)ELASTASE

=> s l1 or l2
L3         963 L1 OR L2

=> s leu!ocyte
L4       67908 LEU!OCYTE

=> s T(W)cell
        488230 T
       2171041 CELL
       1616847 CELLS
       2793375 CELL
               (CELL OR CELLS)
L5      189712 T(W)CELL

=> s lymphocyte
        140646 LYMPHOCYTE
        159072 LYMPHOCYTES
L6      241980 LYMPHOCYTE
               (LYMPHOCYTE OR LYMPHOCYTES)

=> s phagocyt##
L7       25870 PHAGOCYT##

=> s polymorph?
L8      144508 POLYMORPH?
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=> s monocyt##
L9        61626 MONOCYT##

=> s mononuclear
          55359 MONONUCLEAR
            225 MONONUCLEARS
L10       55477 MONONUCLEAR
                (MONONUCLEAR OR MONONUCLEARS)

=> s l4 or l5 or l6 or l7 or l8 or l9 or l10
L11      628787 L4 OR L5 OR L6 OR L7 OR L8 OR L9 OR L10

=> s surface or membrane
         393770 SURFACE
          50673 SURFACES
         422630 SURFACE
                (SURFACE OR SURFACES)
         505748 MEMBRANE
         442854 MEMBRANES
         789960 MEMBRANE
                (MEMBRANE OR MEMBRANES)
L12     1133395 SURFACE OR MEMBRANE

=> s l3 and l10 and l11
L13          13 L3 AND L10 AND L11

=> s cd4
L14       53021 CD4

=> l13 was intended as l3 and l10 and l12, but hits are few
L13 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> l3 and l14
L3 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s l3 and l14
L15           7 L3 AND L14

=> s l13 or l14
L16       53030 L13 OR L14

=> l16 is wrong
L16 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> l13 or l15
L13 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s l13 or l15
L17          16 L13 OR L15

=> save temp
ENTER L#, L# RANGE, ALL, OR (END):l17
```

ENTER NAME OR (END):elastase/a
ANSWER SET L17 HAS BEEN SAVED AS 'ELASTASE/A'

=> d l17 dn ti au so ab

L17 ANSWER 1 OF 16 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
DN PREV200200468695
TI Induction of cytotoxic T **lymphocytes** from the peripheral blood of a hepatocellular carcinoma patient using melanoma antigen-1 (MAGE-1) peptide.
AU Lu Jianfeng; Leng Xisheng (1); Peng Jirun; Mou Dongcheng; Pang Xuewen; Shang Xiaoying; Chen Weifeng
SO Chinese Medical Journal (English Edition), (July, 2002) Vol. 115, No. 7, pp. 1002-1005. print.
ISSN: 0366-6999.
AB Objective To investigate the possibility of using melanoma antigen-1 (MAGE-1) peptide as a tumor vaccine to treat hepatocellular carcinoma (HCC). Methods The expressions of MAGE-1 in 8 HCC cell lines and in liver cancer tissue from a patient were detected using RT-PCR. The type of human **leucocyte** antigen I (HLA I) of both 8 HCC cell lines and peripheral blood **mononuclear** cells of the patient was detected using a microcytotoxicity method to screen out target cell lines for the cytotoxicity assay. Peripheral blood **mononuclear** cells from the HCC patient pulsed with an MAGE-1 peptide (NYKCRFPEI) were used as antigen presenting cells. Autogenous peripheral blood **mononuclear** cells were stimulated with antigen presenting cells every 7 days for 4 times to elicit cytotoxic T **lymphocytes**. The phenotype of effector cells was analyzed using flow cytometry. The cytotoxicity of effector cells was detected with a lactate dehydrogenase releasing assay. Results The expressions of both MAGE-1 and HLA-A24 were detected in BEL7405 cell line which were used as the positive target cell line in the cytotoxicity assay. The expression of MAGE-1 alone was detected in **HLE**, BEL7402, BEL7404, QGY7703 and SMMC7721 cell lines, and the expression of neither MAGE-1 nor HLA-A24 was shown in QGY 7701 and HpG2 cell lines. The last 7 cell lines could be used as negative target cell lines in the cytotoxicity assay. Peripheral blood **mononuclear** cells expanded 32 folds during 28-day culture. The ratio of CD3+ **T cells** increased by 16% (from 54% to 70%), and the ratio of CD8+ **T cells** increased by 20% (from 36% to 56%) during 28-day culture. When the ratio of effector cells to target cells was 10:1, effector cells exhibited 62.5% cytotoxicity against autogenous lymphoblasts pulsed with the peptide (NYKCRFPEI) of MAGE-1 antigen, 40.25% cytotoxicity against BEL7405 cells, compared with 17.88% cytolysis observed against autogenous lymphoblasts, 19.55% against **HLE** cells, and 1.6% against QGY7701 cells. When the ratio of effector cells to target cells was 3.3:1, the cytotoxicity of effector cells against the peptide pulsed autogenous lymphoblasts was 53.6%, which was much higher against autogenous lymphoblasts, **HLE** cells and QGY7701 cells at 15.6%, 13% and 1%, respectively. Conclusion The results demonstrate that cytotoxic t **lymphocytes** with the ability to specifically lyse target cells expressing both MAGE-1 and HLA-A24 could be successfully induced by the MAGE-1 peptide NYKCRFPEI in vitro. This indicates that a good result might be anticipated if this peptide is used as a tumor vaccine to treat HLA-A24 HCC patients.

=> d l17 dn ti au so ab 2-17

L17 ANSWER 2 OF 16 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
DN PREV200200026370
TI Bile acids regulate RANTES gene expression through its cognate NF-kappaB binding sites.
AU Hirano, Fuminori (1); Kobayashi, Atsushi; Hirano, Yoshiko; Nomura, Yoshinobu; Fukawa, Etsushi; Makino, Isao

SO Biochemical and Biophysical Research Communications, (November 16, 2001) Vol. 288, No. 5, pp. 1095-1101. print.
ISSN: 0006-291X.

AB Regulated upon activation, normal T-cells expressed and secreted (RANTES) mainly migrates memory type **CD4**+ T-lymphocytes to inflamed tissues. In this study, we examined effects of bile acids on RANTES gene expression in human hepatoma cells. Upon stimulation with hydrophobic bile acids, RANTES proteins were clearly increased. Semiquantitative RT-PCR analysis revealed that chenodeoxycholic acid (CDCA) induced RANTES mRNA expression. Moreover, RANTES was transcriptionally induced in two hepatoma cell lines by CDCA, presumably via its cognate NF-kappaB binding sites in the RANTES promoter. Electrophoretic mobility shift assay revealed that hydrophobic bile acids induced DNA-binding activity of NF-kappaB. Additionally, the magnitude of inducibility was closely associated with the hydrophobicity of bile acids. In conclusion, we might indicate that bile acids induced RANTES gene expression in human hepatoma cells, possibly suggesting that bile acids play an important role in migration of inflammatory cells by RANTES to the liver in patients with primary biliary cirrhosis.

L17 ANSWER 3 OF 16 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
DN PREV200100475558
TI Slow human immunodeficiency virus (HIV) infectivity correlated with low HIV coreceptor levels.
AU Bristow, Cynthia L. (1)
SO Clinical and Diagnostic Laboratory Immunology, (September, 2001) Vol. 8, No. 5, pp. 932-936. print.
ISSN: 1071-412X.

AB The absolute number of **CD4**+ **lymphocytes** in blood is prognostic for disease progression, yet the cell surface density of **CD4** receptors or chemokine receptors on a single cell has not previously been found to be predictive of human immunodeficiency virus (HIV) infectivity outcome. It has recently been shown that **human leukocyte elastase** (**HLE**) and its ligand alpha1 proteinase inhibitor (alpha1PI; alpha1 antitrypsin) act as HIV fusion cofactors. The present study shows that decreased HIV infectivity is significantly correlated with decreased cell surface density of **HLE** but not with decreased **CD4** nor chemokine receptors. In vitro HIV infectivity outcome in this study was predicted by the surface density of **HLE** on **mononuclear phagocytes** but not on **lymphocytes**. The set point **HLE** surface density was in part determined by alpha1PI. Decreased circulating alpha1PI was correlated with increased cell surface **HLE** and with increased HIV infectivity. The correlation of HIV infectivity outcome with surface **HLE** and circulating alpha1PI supports the utility of these HIV cofactors in diagnostic analysis and therapeutic intervention.

L17 ANSWER 4 OF 16 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
DN PREV200100202236
TI Immune status in females with chronic pyelonephritis in early pregnancy.
AU Bragina, L. B.
SO Immunologiya, (November December, 2000) No. 6, pp. 37-38. print.
ISSN: 0206-4952.

L17 ANSWER 5 OF 16 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
DN PREV199800043075
TI Endothelial production of MCP-1: Modulation by heparin and consequences for **mononuclear** cell activation.
AU Douglas, M. S.; Ali, S.; Rix, D. A.; Zhang, J.-G.; Kirby, J. A. (1)
SO Immunology, (Dec., 1997) Vol. 92, No. 4, pp. 512-518.
ISSN: 0019-2805.

AB Heparin is a polyanionic glycosaminoglycan (GAG) that can bind with high affinity to a range of cytokines including interferon-gamma (IFN-gamma)

and members of the chemokine superfamily. This GAG also possesses immunomodulatory activity in vivo and can antagonize the capacity of IFN-gamma to induce class II MHC antigen expression, and to up-regulate intercellular adhesion molecule-1, by cultured endothelial cells. Previous studies have shown that binding to cell-surface heparan sulphate is essential for optimal activity of IFN-7 and that free heparin competitively inhibits this sequestration process. The present study was performed to increase our understanding of the immunosuppressive activity of heparin by investigation of potential antagonism of the production and function of **monocyte** chemotactic peptide-1 (MCP-1), a chemokine important for **mononuclear leucocyte** recruitment across vascular endothelium. It was found that mixture of heparin with IFN-gamma inhibited up-regulation of the signal transducer and activator of transcription protein, STAT-1 produced normally by treatment of endothelial cells with IFN-gamma. An inhibition of MCP-1 production was observed that was specifically caused by mixture of IFN-gamma with heparin-like, and therefore cytokine-binding, GAGs. It was also shown that mixture of heparin-like GAGs with MCP-1 inhibited the rapid tyrosine phosphorylation of phosphatidylinositol 3-kinase which is normally produced by treatment of **mononuclear** leucocytes with this chemokine. Blockade of this intracellular signalling event was associated with a reduction in the normal transendothelial migration response towards MCP-1. Results from this study indicate that soluble, heparin-like GAGs can block IFN-gamma-dependent up-regulation of MCP-1 production by cultured endothelial cells, and can also antagonize the **leucocyte** -activating and migration-promoting properties of pre-existing MCP-1. These activities may contribute to the immunomodulatory properties of heparin.

L17 ANSWER 6 OF 16 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
DN PREV199598283713
TI Immunophenotypic characterization of infiltrating polynuclear and **mononuclear** cells in childhood brain tumors.
AU Bodey, Bela (1); Bodey., Bela, Jr.; Siegel, Stuart E.
SO Modern Pathology, (1995) Vol. 8, No. 3, pp. 333-338.
ISSN: 0893-3952.
AB During a systematic cell surface antigen expression profile analysis of 76 primary childhood brain tumors (34 medulloblastomas/primitive neuroectodermal tumors and 42 astrocytomas), we employed the following library of monoclonal antibodies (MoABs): anti-Leu-2/a; anti-Leu-3/a; anti-Leu-M5; anti-Leu-11b; anti-HLA-A, -B, -C; anti-HLA-DR, anti-**HLe**-1 (**leukocyte** common antigen); and UJ 308. The MoABs identified the expression of various **leukocyte**-associated, **lymphocyte** cell line differentiated, cell surface antigens in childhood brain tumors. The antigens were detected with an indirect, biotin-streptavidin-conjugated alkaline phosphatase (AP) immunocytochemical technique. Leu-2/a+ cells comprise the significant CD8+ cytotoxic T-**lymphocyte** (CTL) population of the tumor-infiltrating **lymphocytes**. CTLs are major histocompatibility complex (MHC) class I restricted, tumor-associated antigen-specific, cytotoxic cells and were identified in 58 of 76 (76.32%) brain tumors. CTLs usually represented 1-10% of all cells, but in some cases 30-44% of the cells were CD8+. **CD4**+, MHC class II restricted helper **lymphocytes**, detected with MoAB anti-Leu-3/a, were present in 65 of 76 (85.53%) brain tumors. Usually 1-10% of the observed cells reacted with MoAB anti-Leu 3/a. Macrophages (Leu-M5 antigen-positive cells) were expressed in 74 of 76 (97.37%) brain tumors. Their number also represented 1-10% of all observed cells in the frozen brain tumor sections. All 76 (100%) brain tumors contained cells that reacted positively with MoABs anti-HLA-A, -B, -C and anti-HLA-DR, demonstrating a strong MHC class I restriction of the tumor cell population and an overall **leukocyte** antigen expression. **Leukocyte** common antigen expression was demonstrated, by the positive reaction of the cellular antigens with MoAB anti-**HLe**-1,

not relevant

in all 76 (100%) brain tumors studied. MoAB UJ 308 detected the presence of premyelocytes and mature granulocytes in 60 of 76 (78.95%) brain tumors. They were localized perivascularly, within the tumor tissue, or close to necrotic regions. Natural killer cells were not defined in these, employed in the study childhood brain tumors. This study leads to three conclusions: (a) various effector cells of the host cellular immunologic defense were present in over 75% of the childhood brain tumors studied; (b) the tumor cell population has a strong MHC class I restriction; and (c) granulocytes and premyelocytes were among the tumor-infiltrating **lymphocytes** with unknown function.

L17 ANSWER 7 OF 16 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
DN PREV199497459893
TI 1-alpha,25-dihydroxyvitamin D-3 promotes monocytopoiesis and suppresses granulocytopoiesis in cultures of normal human myeloid blast cells.
AU Barton, Aisling E.; Bunce, Christopher M.; Stockley, Robert A.; Harrison, Paul; Brown, Geoffrey (1)
SO Journal of Leukocyte Biology, (1994) Vol. 56, No. 2, pp. 124-132. ISSN: 0741-5400.
AB Primitive myeloid blast cells (2-10 times 10-6) were purified from 18-22-week fetal liver-derived **mononuclear** cell preparations by negative selection followed by counterflow cell clutriation. The cells, when maintained in liquid culture in the presence of 100 U/ml interleukin-3 (IL-3) for the first 5 days and 10 U/ml IL-3 and 30 ng/ml granulocyte colony-stimulating factor thereafter, underwent considerable proliferation resulting in an apprx 30-fold increase in cell number by day 14. Analyses of cell morphology and of the numbers of cells that expressed the neutrophil-associated antigen CD15, the **monocyte**-associated antigen 61D3, and enzymes alpha-naphthyl acetate esterase (ANAE), **human leukocyte elastase**, and cathepsin G revealed that proliferation of the cells was associated with their concomitant differentiation toward neutrophils and **monocytes**, The cultures generated predominantly neutrophils; by day 14, wells seeded with 2 times 10-5 cells produced apprx 5 times 10-6 neutrophils as opposed to only apprx 3.5 times 10-5 cells with a monocytoid morphology. This predominance of granulocytopoiesis over monocytopoiesis was confirmed by the numbers of cells that had acquired expression of the CD15 antigen and ANAE, which were approximately 2 times 10-6 and 1 times 10-5, respectively. By contrast, parallel cultures containing 100 nM 1-alpha,25-dihydroxyvitamin D-3 (VitD-3) generated more **monocytes** than neutrophils. At day 14, VitD-3-treated cultures contained apprx 2 times 10-6 cells with morphologies consistent with their differentiation toward **monocytes** and apprx 1 times 10-6 ANAE-positive cells, compared with apprx 9.5 times 10-5 cells having morphologies of granulocyte-series cells and apprx 4.5 times 10-4 CD15-positive cells. In both control and VitD-3-treated cultures, the enzymes cathepsin G and **human leukocyte elastase** were expressed almost exclusively by cells that were differentiating toward neutrophils. These data reveal that VitD-3 promotes monocytopoiesis and suppresses granulocytopoiesis of primitive blast cells.

L17 ANSWER 8 OF 16 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
DN BA92:71782
TI CRYOPRESERVATION AND LONG-TERM LIQUID NITROGEN STORAGE OF PERIPHERAL BLOOD **MONONUCLEAR** CELLS FOR FLOW CYTOMETRY ANALYSIS EFFECTS ON CELL SUBSET PROPORTIONS AND FLUORESCENCE INTENSITY.
AU TOLLERUD D J; BROWN L M; CLARK J W; NEULAND C Y; MANN D L; PANKIW-TROST L K; BLATTNER W A
SO J CLIN LAB ANAL, (1991) 5 (4), 255-261. CODEN: JCANEM. ISSN: 0887-8013.
AB The effect of cryopreservation and long-term liquid nitrogen storage on peripheral blood **mononuclear** cell (PBMC) subsets was prospectively analyzed using monoclonal antibodies and flow cytometry. Brief cryopreservation did not significantly alter the proportion of

positively stained cells for CD3+, **CD4**+, CD8+, CD14+, CD16+, and C19+ cells. A small but statistically significant increase in the proportion of positive cells was observed for HLA-DR+ and **HLe**-1+ cells. Brief cryopreservation was associated with a decrease in the mean fluorescence intensity (MFI) values for CD3+, **CD4**+, and CD8+ cells; an increase in MFI values for CD14+ and HLA-DR+ cells; and no change for CD16+, CD19+, and **HLe**-1+ cells. There was no significant change in the proportion of CD3+, **CD4**+, or CD16+ cells during 20 months of storage in liquid nitrogen. Small but statistically significant decreases in the proportion of CD8+ and CD19+ cells were observed over the same interval, and the proportion of CD14+ cells (**monocytes**) was highly variable. Chronologic changes in fluorescence intensity during long-term storage were observed for all cell subsets except CD16+ and CD19+ cells. Cryopreservation is a valuable technique for long-term storage of viable cells. For many laboratory applications, the small changes noted in the present study will have no practical importance. However, for clinical and epidemiological investigations encompassing large numbers of samples, statistical techniques to adjust for small changes during storage should be considered.

human leukocyte common antigen — see hit no. 6

L17 ANSWER 9 OF 16 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
DN BA92:13022
TI HUMAN 92-KILODALTON AND 72-KILODALTON TYPE IV COLLAGENASES ARE ELASTASES.
AU SENIOR R M; GRIFFIN G L; FLISZAR C J; SHAPIRO S D; GOLDBERG G I; WELGUS H G
SO J BIOL CHEM, (1991) 266 (12), 7870-7875.
CODEN: JBCHA3. ISSN: 0021-9258.
AB Elastin is critical to the structural integrity of a variety of connective tissues. Only a select group of enzymes has thus far been identified capable of cleaving insoluble elastin. Recently, we observed that human alveolar macrophages secrete elastase activity that is largely inhibited by the tissue inhibitor of metalloproteinases (TIMP). This finding suggested that one or more of the metalloproteinases released by alveolar macrophages has elastase activity. Accordingly, we tested pure human interstitial collagenase, stromelysin, 92-kDa type IV collagenase, and 72-kDa type IV collagenase for elastolytic activity using .kappa.-elastin zymography and insoluble 3H-labeled elastin. The 92- and 72-kDa type IV collagenases were found to be elastolytic in both assay systems. A recombinant preparation of 92-kDa type IV collagenase with gelatinolytic activity was also found to be elastolytic. Organomercurial activation was essential to detect elastolytic activity of the native 92- and 72-kDa type IV collagenases and enhanced the elastase activity of the recombinant 92-kDa enzyme. On a molar basis the recombinant 92-kDa type IV collagenase was approximately 30% as active as **human leukocyte elastase** in solubilizing 3H-labeled elastin. Exogenously added TIMP in significant molar excess abolished the elastase activity of the 92- and 72-kDa type IV collagenases. Stromelysin and interstitial collagenase showed no significant elastolytc activity, although both were catalytically active against susceptible substrates. Conditioned media from cultures of human **mononuclear phagocytes** containing the 92-kDa enzymes produced a distinct zone of lysis in the .kappa.-elastin zymograms at this molecular mass. These results definitvely extend the spectrum of human proteinases with elastolytic activity to metalloproteinases and suggest the enzymatic basis for elastase activity observed with certain cell types such as human alveolar macrophages.

L17 ANSWER 10 OF 16 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
DN BA89:15205
TI CHARACTERIZATION OF FACTOR XIIIA POSITIVE DERMAL DENDRITIC CELLS IN NORMAL AND INFLAMED SKIN.
AU CERIO R; GRIFFITHS C E M; COOPER K D; NICKOLOFF B J; HEADINGTON J T
SO BR J DERMATOL, (1989) 121 (4), 421-432.

CODEN: BJDEAZ. ISSN: 0007-0963.

AB The immunocytochemical identification and characterization of indigenous dermal dendritic cells (dermal dendrocytes) using a rabbit polyclonal antibody to clotting enzyme factor XIII subunit A (FXIIIa) was carried out on normal and inflamed human cutaneous tissue. The immunophenotype of FXIIIa positive dendritic cells was analysed with a panel of I8 monoclonal antibodies using immunoperoxidase and double immunofluorescence staining techniques. The antibody against FXIIIa detected highly dendritic dermal cells located particularly in the upper reticular and papillary dermis. Double fluorescence microscopy showed that FXIIIa positive cells were bone marrow derived (**HLe**-I+) and co-expressed **monocyte**, macrophage or antigen presenting cell markers (HLA-DR+, LFA-I+, HLA-DQ+, OKM5+, Mo I+, Mono-I+, Leu M3+). No labelling was obtained with cell markers for Langerhans cells (CDI), T **lymphocytes** (CD2), granulocytes (LeuMI) fibroblasts (Te7), intercellular adhesion molecule-I (ICAM-I) or endothelial cells (Factor VIII related antigen). Gamma interferon induced increased expression of HLA-DR and co-expression of ICAM-I on FXIIIa+ dermal dendritic cells in normal skin in organ culture. Moreover, in benign inflammatory dermatoses such as atopic eczema and psoriasis there was an increased number of FXIIIa+, DR+, ICAM-I+ cells in the upper dermis and foci of FXIIIa+ cells in the epidermis closely associated with **lymphocytes**. FXIIIa positive cells in human skin represent a specific population of bone-marrow dermal dendritic cells, distinct from Langerhans cells, that share some features common to **mononuclear phagocytes** (**monocyte**/macrophages).
In addition, the detection of HLA-DQ on 48% of FXIIIa+ cells and the lack of OKMI in combination with high OKM5 expression suggests an antigen-presenting cell phenotype. There is increasing phenotypic and functional evidence for the recognition of several dendritic antigen-presenting cells (APC) which are both lymphoid and non-lymphoid associated. Well characterized lymphoid APCs include dendritic reticulum cells, interdigitating dendritic cells1 and follicular dendritic cells.2 Circulating immunocompetent dendritic cells have also been found in human peripheral blood3,4 and afferent lymph5. Non-lymphoid immunocomponent dendritic cells include Langerhans cells,6 collagen associated dendritic cells7,8 as well as dendritic cells in the synovium,9 respiratory tract,10 thyroid gland11 and heart.12 It has been suggested that macrophages and dendritic cells have a common origin in the human yolk sac but diverge early in foetal development.13 Activation and proliferation of antigen-specific effector **T cells** are dependent upon recognition of antigens by APC which bear class II major histocompatibility complex (MHC) antigens. These can be expressed on both epidermal and dermal cells including Langerhans cells,6 endothelial cells,14 B cells,15 melanophages,16-18 as well as dermal19,20 and other dendritic cells.3,21,22 The derivation and role of the DR+ dermal dendritic cell is still uncertain. Using enzyme histochemical and immunochemical techniques it has been shown that many dermal dendritic cells share features with **mononuclear phagocytic** cells (macrophages) and have a **phagocytic** function.8 In addition, as in humans, class II MHC bearing dermal cells distinct from endothelial cells are present in mouse skin, and function as APCs in vitro and initiate primary contact hypersensitivity responses to contact allergens.19,20 Recently, there has been renewed interest in the cytoplasmic identification of the subunit A of the clotting proenzyme factor XIII (FXIIIa). The protein is expressed in histiocytic reticulum cells (sinus lining cells) of lymphoid tissue,23 peripheral blood **monocytes**,24-26 peritoneal macrophages,27 reactive fibroblasts,28 and recently in dermal dendritic cells.29 Nemes et al.30 regard this protein as a marker of **phagocytic** function. The aim of this study was to further characterize FXIIIa positive dendritic cells in normal and inflamed human cutaneous tissue using immunocytochemical techniques. We have investigated the lineage of FXIIIa positive dermal dendritic cells including their relationship to Langerhans cells and **monocyte**/macrophages, and also whether these cells could be

stimulated by gamma interferon (IFN-.gamma.) to express intercellular adhesion molecule-I (ICAM-I) or CDI. We also looked at the role of FXIIIa+ cells in inflammatory dermatoses.

L17 ANSWER 11 OF 16 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
DN BA87:71083
TI TREATMENT WITH RECOMBINANT IFN-GAMMA DECREASES CELL SURFACE **CD4** LEVELS ON PERIPHERAL BLOOD MONOCYTES AND ON MYELOMONOCYTIC CELL LINES.
AU FALTYNEK C R; FINCH L R; MILLER P; OVERTON W R
SO J IMMUNOL, (1989) 142 (2), 500-508.
CODEN: JOIMA3. ISSN: 0022-1767.
AB The human cell surface protein **CD4** is not only an important accessory molecule in the activation of MHC class-II-restricted T cells, but has also been implicated to be receptor for the human immunodeficiency virus HIV-I on lymphoid and monocytic cells. We have found that a 24-h treatment of the promonocytic leukemia cell line U937 with rIFN-.gamma. decreases the expression of the **CD4** Ag by 50% as measured by cytofluorographic analysis. The decrease in **CD4** expression was dependent on the concentration of rIFN-.gamma., with maximal effects occurring at 20 to 200 U/ml. The decrease appeared to be due to actual loss of the **CD4** molecule from the cell surface rather than masking of a particular epitope, inasmuch as as similar results were obtained with the OKT4 and OKT4A antibodies. The effect of rINF-.gamma. to decrease **CD4** expression was not due to a general loss of cell surface Ag, because the binding of OKM1 and anti-**HLe**-1 increased after rIFN-.gamma. treatment. Treatment of rIFn-.gamma. also decreased cell surface **CD4** expression on the promyelocytic leukemia cell line HL-60, and on the monocytic cell line THP-1, although the extent of the decrease was less than on U937 cells. Freshly isolated normal peripheral blood monocytes treated for 48 h with rIFN-.gamma. bound much less OKT4 or OKT4A antibody than cells incubated in the absence of rIFN-.cntdot. Morever, treatment with rIFN-.gamma. reduced the percentage of Peripheral blood monocytes that were positive for the **CD4** Ag. In contrast with the decrease in **CD4** levels on rIFN-.gamma.-treated monocytes, treatment with rIFN-.gamma. had no effect on **CD4** levels on peripheral blood T lymphocytes or T cell lines.

human leukocyte common antigen

see lit #6

L17 ANSWER 12 OF 16 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
DN BA85:6054
TI RELATIONSHIP BETWEEN T200 ANTIGEN EXPRESSION AND STAGES OF B CELL DIFFERENTIATION IN RESURGENT HYPERPLASIA OF BONE MARROW.
AU CALDWELL C W; PATTERSON W P
SO BLOOD, (1987) 70 (4), 1165-1172.
CODEN: BLOOAW. ISSN: 0006-4971.
AB Usig monoclonal antibodies (MoAbs) and dual-parameter flow cytometric techniques, bone marrow **mononuclear** cells (MMC) from patients with resurgent hyperplasia were analyzed for their coexpression of **HLe**-1 (T200) and antigens normally associated with particular stages of B cell differentiation. The marrow from those with resurgent hyperplasia contained increased numbers of B cell precursors in multiple stages of differentiation compared to controls, thus providing a useful model system for studies of B cell differentiation. These studies indicate that the quantitative expression of T200 is differentiation-related on normal and malignant B cell precursors. Immature cells express how amount of T200, while increasing levels of maturity correlated with increasing amounts of the antigen. This study increases the understanding of relationships between B cell surface antigens and T200 and further demonstrates that B cell hyperplasia occurs commonly in association with bone marrow reactive or resurgent processes. The quantitative, rather than only the qualitative, expression of T200 is therefore a useful marker of B cell differentiation in reactive hyperplasia and in further investigation of B cell malignancy.

L17 ANSWER 13 OF 16 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

DN BA84:99787
TI AN IMMUNOHISTOLOGIC STUDY OF THE DISTRIBUTION AND STATUS OF ACTIVATION OF HEAD AND NECK TUMOR INFILTRATING LEUKOCYTES.
AU BOEHEIM K; DENZ H; BOEHEIM C; GLASSL H; HUBER H
SO ARCH OTO-RHINO-LARYNGOL, (1987) 244 (2), 127-132.
CODEN: AORLCG. ISSN: 0302-9530.
AB We examined tumor infiltrating leukocytes (TIL) in frozen sections of 28 biopsies from squamous cell carcinomas of the head and neck (SCCHN). In so doing, we used monoclonal antibodies (MoAb) directed against various leukocyte antigens. As defined by **HLe**-1+ cells, leukocyte infiltration was present in all biopsies. The amount of **HLe**-1+ cells was more often greater in stage III than in stage IV lesions. Most of the TIL were identified as CD5+ T-lymphocytes. In contrast, CD19+ B-cells were sparse in most biopsies. CD14+ monocytes/macrophages were found in only a few specimens. The relative proportion of **CD4**+ T-helper cells was higher than or at least equal to CD8+ suppressor/cytotoxic cells in all samples tested. Interleukin-2 (IL-2) receptor+ lymphocytes were evident in 13 of 22 biopsies stained for CD25 reactivity, and were more often observed in stage III than in stage IV tumors. All biopsies from recurrent tumors had no detectable IL-2 receptor+ cells. Our findings provide evidence for a positive correlation between a greater amount of TIL in earlier stages of SCCHN. The presence of IL-2+ lymphocytes suggests that SCCHN may be capable of activating resting lymphocytes for further IL-2-induced proliferation.

human leukocyte common antigen see ref #6

L17 ANSWER 14 OF 16 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
DN BA80:59721
TI EXPRESSION OF HISTOCOMPATIBILITY ANTIGENS AND CHARACTERIZATION OF **MONONUCLEAR** CELL INFILTRATES IN NORMAL AND NEOPLASTIC COLORECTAL TISSUES OF HUMANS.
AU UMPLEBY H C; HEINEMANN D; SYMES M O; WILLIAMSON R C N
SO J NATL CANCER INST, (1985) 74 (6), 1161-1168.
CODEN: JNCIAM. ISSN: 0027-8874.
AB Serial frozen sections were prepared from 22 colorectal carcinomas. Additional samples were obtained from the adjacent normal bowel in 10 patients, from 6 concomitant adenomas in 5 patients, and from another 4 isolated adenomas. Mononuclearcell infiltrates were stained by the indirect immunoperoxidase technique with the use of a panel of 6 mouse monoclonal antibodies to human **leukocyte** antigens. The degree of infiltration was graded from 4 (heavy)-0 (nil). The colorectal carcinomas and adjacent normal bowel showed an equal degree of **leukocyte** infiltration (**HLe**-1), graded 3-4 in 8 cases and 2-3 in the other 2 cases. In 7 carcinomas cytotoxic-suppressor T-**lymphocytes** (UCHT-4) graded 2-3 predominated over helper **T-cells** (OKT-4) graded 0-1. By contrast, in the adjacent normal bowel cytotoxic and helper cells were present in equal numbers. Among the adenomas **leukocyte** infiltration was grade 4 in 9 and grade 3 in 1. In 9 of the 10 adenomas cytotoxic cells graded 2 predominated over helper cells graded 0-1. The number of helper cells was equivalent among 6 concomitant adenomas and carcinomas from 5 patients. Adenomatous epithelial cells expressed class II major histocompatibility complex antigens (OKla-1). However, carcinomatous or normal epithelium showed only faint staining with OKla-1. The similarity in cell infiltration is consistent with an adenoma-carcinoma sequence. The predominance of cytotoxic cells in carcinomas that expressed class I major histocompatibility complex supports the association between **lymphocyte** infiltration and a favorable prognosis.

L17 ANSWER 15 OF 16 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
DN BA78:3576
TI INTESTINAL **LYMPHOCYTE** SUB POPULATIONS IN INFLAMMATORY BOWEL DISEASE AN ANALYSIS BY IMMUNO HISTOLOGICAL AND CELL ISOLATION TECHNIQUES.
AU SELBY W S; JANOSSY G; BOFILL M; JEWELL D P
SO GUT, (1984) 25 (1), 32-40.

CODEN: GUTTAK. ISSN: 0017-5749.

AB **Lymphocyte** subpopulations in the intestinal mucosa of patients with ulcerative colitis or Crohn's disease were studied using a double marker immunofluorescence technique. Analysis of tissue sections revealed that the majority of intraepithelial **lymphocytes** (IEL) were **T cells** (**Hle**-1+ HuTLA+ UCHT1+). Of these, over 80% were of suppressor-cytotoxic phenotype (OKT8+: 83 .+-. 10.2%) with a small population of helper type IEL (OKT4+). Only 1/3 of OKT8+ IEL reacted with the **T cell** antibody, anti-Leu-1. IEL were also Tac-, C3b-receptor- (C3RT05-) and Ig-. Within the lamina propria, OKT4+ **T cells** predominated (ulcerative colitis 64 .+-. 6.0%; Crohn's disease 63 .+-. 6.0%). Less than half of the smaller OKT8+ population in the lamina propria was Leu-1+. These findings did not differ from those seen in histologically normal tissues from controls, and are similar to those reported in the small intestine. **Mononuclear** cells were also isolated from the intestinal lamina propria using an enzymatic technique. The majority of **lymphocytes** obtained were **T cells** (OKT3+), with populations of OKT4+ and OKT8+ cells. Comparison of the ratio of OKT4+ to OKT8+ **lymphocytes** determined by immunohistological analysis with that obtained in mucosal isolates suggested that the isolation procedure may deplete OKT8+ cells. The findings indicate that an imbalance of mucosal immunoregulatory **T cells**, as defined by monoclonal antibodies, does not occur in inflammatory bowel disease. They also emphasize that functional studies of isolated intestinal mucosal cells should be combined with morphological studies of cell populations in situ.

L17 ANSWER 16 OF 16 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

DN BA76:28245

TI **HUMAN LEUKOCYTE ELASTASE** CATHEPSIN G AND LACTOFERRIN FAMILY OF NEUTROPHIL GRANULE GLYCO PROTEINS THAT BIND TO AN ALVEOLAR MACROPHAGE RECEPTOR.

AU CAMPBELL E J

SO PROC NATL ACAD SCI U S A, (1982) 79 (22), 6941-6945.
CODEN: PNASA6. ISSN: 0027-8424.

AB Interactions between **polymorphonuclear** neutrophils and **mononuclear phagocytes** are potentially of great importance in a variety of inflammatory processes. To elucidate the physiologic importance of human alveolar macrophage receptor-mediated binding of neutrophil (**leukocyte**) elastase, the binding of **leukocyte** elastase and 2 other neutrophil granule glycoproteins, cathepsin G and lactoferrin, to human alveolar macrophages was studied. Saturable binding of all 3 ligands at 0.degree. C was observed, with equilibrium dissocation constants of 4.0 .times. 10-7, 2.0 .times. 10-7 and 1.7 .times. 10-5 M, respectively. All bound to a similar number (54-73 .times. 106) of sites/cell. Binding of all 3 ligands was inhibited by the polysaccharide fucoidin and extensive cross-inhibition of their binding to macrophages was observed. Alveolar macrophages possess a relatively low-affinity, high-volume receptor for a family of neutrophil granule glycoproteins, which would be ideally suited for clearing release neutrophil granule contents from the extracellular space in inflamed tissues.

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